PDR RID Report

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Document CSS/PDR

RID ID PDR 234
Review CSMS
Originator Ref bandwidth
Priority 2

Section **Page** **Figure** **Table**

Category Name Design-CSS **Actionee** HAIS
Sub Category
Subject Bandwidth circuit GSFC --->MSFC

Description of Problem or Suggestion:

8 Mbps does not appear large enough (per our calculations) to handle GSFC-->MSFC FOR TSDIS - need to receive within 12 hours.
1) SSM/1 Level1b data daily from all satellites from EOSDIS
2) 1 day PR, TM1, combined algorithms, GV data from TSDIS
3) 2 days PR, TM1, combined algorithms, GV data and browse from TSDIS
4) 2 days PR, TM1, combined algorithms, GV data and browse from EOSDIS
5) any EOSDIS traffic between GSFC/MSFC as in Version 0

Originator's Recommendation

Our calculations indicate need for approximately 12Mbps given TSDIS traffic needs, overhead, efficiently and a 12 hours turnaround. Increase bandwidth appropriately.

GSFC Response by: **GSFC Response Date**

HAIS Response by: Forman **HAIS Schedule** 2/28/95
HAIS R. E. **HAIS Response Date** 4/4/95

The 8Mbps bandwidth required to support the one-way transfer of TRMM data flows from GSFC to MSFC DAAC is consistent with the information contained in the ECS-TSDIS Interface Requirements Document (IRD) regarding the TRMM data flow volume (for processing and reprocessing) and the requirement for timeliness of the flows. Requirement TRMM 3070, as stated in the February 1995 baselined IRD between EOSDIS and TRMM Ground System, is the only requirement related to timeliness of TRMM data ingest at the MSFC DAAC. It states, "The ECS systems at the MSFC DAAC shall ingest TRMM data files and data products, including metadata, daily". There is no specific requirement related to receipt of TRMM standard products at MSFC (from GSFC) within 12 hours.

In our calculations we have assumed this daily ingest to be completed within 24 hours and not in 12 hours. Additionally, we have used a network scheduling contingency factor of 1.5 based on the assumption that data delivery has to be completed within 16 hours rather than 24 hours to estimate the required bandwidth. This factor of 1.5 is one constituent of the cumulative multiplier of 2.5 (for line utilization, protocol overhead and scheduling contingency) that is used to convert the raw average data flows into peak flows. The bandwidth needed to support the SSM/1 Level 1b daily data and the 2 days PR, TMI, Combined algorithms, GV data and browse data from EOSDIS is included in the MSFC to TSDIS flow.

If a new requirement that data has to be delivered from TSDIS to MSFC within 12 hours is to be included, then the GSFC to MSFC bandwidth will have to be increased appropriately. However, at present there is no such requirement. Consequently, the estimated bandwidth of 8 Mbps between GSFC to MSFC is adequate.

Status **Closed** **Date Closed** **5/3/95** **Sponsor** **desJardins**

****** **Attachment if any** ******

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